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INSTRUCTIONS FOR DISINFECTING

WELLS AND WATER SYSTEMS

It is recommended that contaminated wells, new wells or repaired wells and/or distribution piping be disinfected before the water is used for human consumption or on food contact surfaces. Chlorine compounds are readily available, easy to use, and when used in the proper amount, are very effective.

The first step in disinfecting a well is to determine the volume of water in the well. Table I gives the volume per foot of depth for common well casing diameters. The total gallons of water in the well is obtained by multiplying the

gallons/foot by the depth of the well in feet. For example: An 8" cased well with 100 feet of water would contain 250 gallons (100 feet x 2.5 gallons/foot).

Next, the amount of chlorine containing compound must be determined. Table II lists the amount of various chlorine containing compounds to add to various volumes of water in the well. Once the amount of chlorine containing material to be added to the well has been calculated, follow the disinfecting procedure.

TABLE I

Gallons of water per foot of well depth

Well diameter	4"	6"	8"	12"	14"	16"	24"	36"	48"
Gallons of water per foot of depth	0.65	1.5	2.5	4	6	10.5	23.5	53	94

TABLE II

Quantity of Various Chlorine Containing Materials to Use
(With this quantity the disinfecting strength will be about 50 parts per million)

Volume of Water in Well	Household Bleaches	Chloride of Lime	(50%) Hypochlorite	(70%) Hypochlorite
50 gallons	7 oz.	1.5 oz.	1 oz.	0.5 oz.
100 gallons	14 oz.	3.0 oz.	2 oz.	1.0 oz.
150 gallons	21 oz.	4.5 oz.	3 oz.	1.5 oz.
200 gallons	28 oz.	6.0 oz.	4 oz.	2.0 oz.
300 gallons	42 oz.	9.0 oz.	6 oz.	3.0 oz.
For each additional 100 gallons	14 oz.	3.0 oz.	2 oz.	1.0 oz.

PROCEDURE FOR DISINFECTING WATER

WELLS AND DISTRIBUTION SYSTEMS

After the size of the well casing has been determined and the quantity of chlorine containing material is calculated, proceed with the disinfection process.

1. Open the top of the well and pour in the measured amount of chemical and circulate, back into the well, water drawn from a house spigot or other faucet closer to the well until the return water has a strong chlorine odor or taste. This process may take 30 minutes or more depending on the depth of the well, the depth of the pump, the length and size of distribution pipes and hoses.
2. Open all inside and outside faucets until the odor of chlorine is detected and then shut off. This ensures the chlorine is contacting all surfaces within the plumbing system and well. **NOTE:** We would suggest opening the hot and cold taps furthest from the source until chlorine is detected. Shut these taps off and in a systematic manner moving back towards the source, open each faucet until chlorine is detected, then close. Don't forget to flush toilets and cycle dishwashers and clothes washers.

3. Allow the water to stand in the pipes for 12 to 48 hours. In most cases 12 to 16 hours or over night is sufficient.
4. At the conclusion of the contact period, open the faucets furthest from the source and make sure the odor of chlorine is still detectable. If this is the case, then open all taps, inside and out, until the smell or taste of chlorine is gone. If the smell of chlorine is not present when the tap furthest from the source is opened, repeat steps 1 through 3 and double the amount of chlorine chemical added to the well.

After 48 hours of normal use, resample the water using the enclosed whirl-pack. **NOTE:** The sample should be collected and shipped to arrive at the lab within 30 hours of collection.

It is important to remember that water is a food, and thus should be produced and transported in a sanitary manner. This means the well must be sealed in such a manner so as to protect it from all sources of contamination. **Disinfecting the well will not ensure a good potable (drinking) water until all construction is complete.**

RECOMMENDATIONS

1. Have the total coliform run on your water at least twice each year, once in late spring and again in late fall.
2. Have a professional inspect the well once every 5 to 10 years or any time persistent bacteriological problems occur.
3. Keep all records and water reports on the well from the time of drilling to present. These records may prove useful in diagnosing and/or curing problems.